

LCSH AND THE ASFIS THESAURUS: AN UPDATE

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ABSTRACT: At the 1987 IAMSILIC Annual Conference, a presentation comparing Library of Congress Subject Headings with the ASFIS Thesaurus (published 1990) excited considerable interest in continuation of the study and preparation of a guide based on the comparison for the use of catalogers. The IAMSILIC Coordinating Committee on Subject Analysis was established with a mandate to act as a clearinghouse for IAMSILIC suggestions for changes to either LCSH or the ASFIS Thesaurus and to produce a document mapping ASFIS Thesaurus terms with LCSH. Various versions of the document have been nearly finished and various possibilities for publication have been explored as LCSH and the ASFIS Thesaurus continue to be updated. This paper gives an update on the history, present status and future of the committee's activities.

BACKGROUND

The Aquatic Sciences and Fisheries Thesaurus (Fagetti *et al.* 1986) was introduced to IAMSILIC at the Annual Conference in October 1986 by Jonathan Sears (Sears 1988). The thesaurus had been developed from the experience of indexing more than 300,000 items from 1971-1986. The purpose of the thesaurus was to serve as an input tool for term selection by ASFA indexers worldwide and to be a search aid for users of the ASFA database, guiding the searcher to desired concepts and suggesting other closely related concepts. ASFA indexes journal articles, reports and monographs.

With the exception of individual journal articles, much of the same material is cataloged by libraries, using Library of Congress subject headings (LCSH), especially in North America. Realizing this, one of us (JWM) undertook a study to compare the ASFIS Thesaurus and LCSH and determine the amount of overlap between them. The results were presented at the IAMSILIC conference in 1987 (Markham 1990). It was demonstrated that the overall match between ASFIS descriptors and LCSH is very low. (Table 1) This study added to the body of literature that shows that when compared with

Table 1. ASFIS Thesaurus descriptors compared against LCSH

DESCRIPTOR FACET	# terms	% total	+	-	ST	DT	NT	BT
Operations	751	11.95	23.43	43.54	16.38	4.93	6.79	2.93
Properties & Characteristics	420	6.68	17.62	68.10	3.33	0.95	9.76	0.24
Phenomena	1141	22.92	24.43	63.43	4.44	3.05	4.51	0.14
Materials	1186	18.87	54.13	37.69	5.14	1.69	1.26	0.08
Intellectual Tools	310	4.93	17.42	71.29	6.45	1.94	2.90	0.00
Equipment & Structures	639	10.17	26.60	58.84	9.55	1.88	3.13	0.00
Sciences & Technology	230	3.66	56.09	28.70	7.83	4.78	2.61	0.00
Organisms	413	6.57	36.32	51.33	8.47	1.94	1.94	0.00
Earth, Space & Time Concepts	566	9.01	18.47	71.20	8.30	1.24	0.71	0.18
Organizational, Socioeconomic, Legal Personnel Aspects	268	4.36	31.34	50.00	9.70	0.75	8.21	0.00
Constants	36	0.57	13.89	80.56	2.78	0	2.78	0.00
Residual Concepts	25	0.39	12.00	80.00	4.00	4.00	0.00	0.00
All Facets	6285	100.00	31.54	54.65	7.49	2.42	3.85	0.43

Table 1. Key: + = Exact match in LCSH; - = No equivalent in LCSH; *ST* = Similar term in LCSH; *DT* = Different term is equivalent in LCSH; *NT* = Narrower term is equivalent in LCSH; *BT* = Broader term is equivalent in LCSH. All figures except # terms are in %.
(Table from Markham, 1990)

subject-specific thesauri and encyclopedias, LCSH in all cases was "found to be deficient when measured against other bibliographic standards in the field" (Mischo 1982).

At that same meeting, the Coordinating Committee on Subject Analysis was formed. The charge to the committee was: 1) Act as a clearinghouse for suggestions of changes to LCSH and the ASFIS Thesaurus; 2) Produce a document mapping ASFIS against LCSH; 3) Seek funding to support publication.

From 1987 to 1995 the committee, whose membership has varied through the years, worked at checking and updating the original lists. Three lists were compiled A) ASFIS terms which had exact matches in LCSH; B) ASFIS terms that had equivalents in LCSH, either similar, different, broader or narrower, and C) terms for which there were no equivalents.

The committee obtained a frequency list of ASFIS terms in the ASFA Database. The highest posted terms in List C, i.e., terms with no LCSH equivalents, are prime candidates to propose as new LC Subject Headings. In discussions with the Library of Congress it has been established that suggestions for new subject headings are welcomed if they are accompanied by appropriate documentation. Some submissions have been made successfully, and many more are being prepared.

Originally, the committee planned to publish the lists as an Appendix to the newest edition of the ASFIS Thesaurus, as an aid to catalogers worldwide who are seeking the best LCSH equivalent for ASFIS terms. The idea was rejected by FAO and ASFA officials, because LC is American and ASFA is international. Other publishers who were approached also rejected the proposal, primarily on the basis of economics.

Since the initial proposal to publish a list mapping ASFIS terms against LCSH was made in 1987, several developments have occurred. While negotiations were carried on to find a publisher for the comparison lists, LCSH was updated every year, with some of the unmatched ASFIS terms incorporated as new subject headings. The ASFIS Thesaurus is also being updated. As a result, the original matching lists are no longer usable and will have to be redone before a list is actually published.

Meanwhile, another factor in recent years is the development of the World Wide Web. LCSH is now on the Web and the ASFIS Thesaurus is also on the Web. With the advent of this new tool, and the realization that a printed comparison list would be outdated rapidly as both LCSH and the ASFIS Thesaurus continue to develop, it became clear the Web was ideal for this project. By matching the ASFIS Thesaurus Web Page against the LCSH Web Page, a web page mapping the former against the latter could be built. This page could be available to catalogers worldwide, without the distribution problems inherent in printed lists. It could also be updated frequently and regularly as one or the other of the parent lists changed.

We have been promised tapes of the ASFIS Thesaurus, and work has already begun on building the page. A sample has been produced (Fig. 1) and is growing. As the list is made larger, it will also be improved to allow for more dynamic matching of terms, so that catalogers will have an easy-to-use tool available. Studies are now being carried out to determine how far the process of building the page may be automated. Other studies will determine the probable time involved in doing some of the routine work that cannot be automated, but does not require advanced expertise. When a good estimate is obtained, we will apply for a grant to pay a student to do much of the routine work. When that is underway, we will be able to predict when this cataloging aid will be available for use.

DISCUSSION

Subject headings are at least 100 years old (Boll 1982), while descriptors are less than 40 years old (Sears, 1988). Descriptors are relatively quick to respond to changes in terminology. The tension between the stability of the system and its responsiveness to change is a key issue for LCSH for currency of headings (Chan 1995).

There are several fundamental differences between descriptors used in thesauri and controlled subject headings: 1) subject headings are applied by librarians, descriptors by non-librarians, in ASFA's case by scientists (Emerson and Moulder 1997); 2) in the past a minimal number of subject headings were assigned; 3) as a corollary to that, minor topics did not receive subject headings; 4) subject headings are often inverted; 5) subject headings are pre-coordinated, descriptors are post coordinated; 6) LCSH have subdivisions; 7) Subject headings are applied on the principle of economy of input and redundancy of search, whereas descriptors emphasize redundancy of input and economy of search (Boll 1982).

Subject indexing is an expensive occupation for libraries and publishers. The confusion caused by multiple terms being used by various indexing tools makes it more difficult for our users (and us) to find information on the same topic across multiple databases. The confusion created by the differences between descriptors and subject heading increases for users with multiple access points available in online searching modes that include controlled vocabulary, free text and numerous other fields in each record. The main problem with using LCSH is defined by Foskett: "Librarians and other intermediaries realize that LCSH is an artificial indexing language, and use it as such, but users probably do not, thus placing yet another barrier between them and the information they are seeking (Drabenstott 1994).

The words used by authors often present problems. While we think that authors working in the same scientific area will use the same words, this is not always the case. One may use the scientific name, one the common name. The same term can be used for different things. In a study done by Lourdes Collantes (1995), three user groups gave names to forty stimuli. The names generated were compared with the other groups and with the

LCSH. There was little agreement between groups in the names used to describe either text or illustrations. There was even less agreement between the names the groups used and LCSH.

It is interesting to note that in 1995 the British Library confirmed its long-term commitment to applying LCSH to its catalogues. At the same time they acknowledged that LCSH is a "system which is in need of a lot of development work" (MacEwan 1998). This reinstatement of LCSHs to the records for the British National Bibliography (BNB) came as a response to customer demands. In 1996 BNB dropped the use of its COMPASS system of indexing. Thus LCSH is moving towards being an English-language standard.

As both LCSH and the ASFIS Thesaurus are developed further are used more widely, it becomes more important to provide a single site which allows catalogers and searchers to compare both tools. This project is proceeding toward providing that site.

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ASFIS Thesaurus & Library of Congress Subject Headings

[A](#) | [B](#) | [C](#) | [D](#) | [E](#) | [F](#) | [G](#) | [H](#) | [I](#) | [J](#) | [K](#) | [L](#) | [M](#)
[N](#) | [O](#) | [P](#) | [Q](#) | [R](#) | [S](#) | [T](#) | [U](#) | [V](#) | [W](#) | [X](#) | [Y](#) | [Z](#)

ASFIS Thesaurus Term	LCSH Equivalent Term
A	
Top	
Abdomen	Abdomen
Abiotic factors	<i>None</i>
Abnormalities	Plants - Abnormalities Animals - Abnormalities
Absolute humidity	Humidity
Absolute vorticity	Vortex-motion
Absorption (Physics)	Absorption of sound Light absorption
Absorption coefficient	Absorption of light
Adrenal glands	Adrenal glands
B	
Top	
Backscatter	Underwater acoustics
Backshore	Beaches
Backwash	Ocean waves
